

1 1. A method of decoding partially encrypted content, comprising:
2 receiving partially encrypted content comprising unencrypted content, first
3 content encrypted under a first encryption system and second content encrypted
4 under a second encryption system;
5 decrypting the second encrypted content; and
6 decoding the clear first content and the decrypted second content to decode
7 the partially encrypted content.

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9 2. The method according to claim 1, wherein the receiving, decrypting and
10 decoding are carried out in a television device.

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12 3. The method according to claim 2, wherein the television device comprises
13 a television set-top box.

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15 4. The method according to claim 1, wherein the receiving, decrypting and
16 decoding are carried out in an integrated circuit.

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18 5. The method according to claim 1, wherein the receiving, decrypting and
19 decoding are carried out in one of an application specific integrated circuit and a
20 field programmable gate array.

1 6. A method of decoding a partially encrypted television signal, comprising:
2 receiving a message identifying a primary packet identifier (PID) for a
3 program and a secondary PID for the program;
4 decrypting packets having the secondary PID; and
5 combining the decrypted packets with packets having the primary PID to
6 form a data stream representing the program.

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8 7. The method according to claim 6, further comprising decoding the decrypted
9 packets and the packets having the primary PID.

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11 8. The method according to claim 6, further comprising mapping the decrypted
12 packets to the primary PID.

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14 9. The method according to claim 8, wherein the mapping is carried out in an
15 integrated circuit device.

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17 10. The method according to claim 8, wherein the mapping is carried out in one
18 of an application specific integrated circuit device and a field programmable gate
19 array.

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21 11. The method according to claim 6, wherein packets having the primary PID
22 comprise unencrypted packets and encrypted packets and further comprising:
23 receiving encrypted packets having the primary PID; and
24 discarding the encrypted packets having the primary PID.

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26 12. The method according to claim 6, carried out in a television device.

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28 13. The method according to claim 6, carried out in a television set-top box.

1 14. A method of decoding partially encrypted television program, comprising:
2 identifying a television program by packets associated with a primary packet
3 identifier and a secondary packet identifier;
4 decrypting packets having the secondary packet identifier.

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6 15. The method according to claim 14, further comprising decoding the
7 decrypted packets having the secondary packet identifier along with packets having
8 the primary packet identifier to decode the partially encrypted television program.

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10 16. The method according to claim 14 further comprising discarding encrypted
11 packets having the primary packet identifier.

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13 17. The method according to claim 14, wherein certain of the packets
14 associated with the primary packet identifier are encrypted according to a first
15 encryption method, and wherein the packets having a secondary packet identifier
16 are encrypted according to a second encryption method.

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18 18. The method according to claim 14, wherein the encrypted packets comprise
19 transport stream packets carrying an MPEG packetized elementary stream (PES)
20 header as a portion of a payload thereof.

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22 19. The method according to claim 14, wherein the encrypted packets comprise
23 audio packets.

24
25 20. The method according to claim 14, wherein the encrypted packets comprise
26 time sliced samples of the television program.

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28 21. The method according to claim 14, wherein the encrypted packets comprise
29 packets critical to decoding the television program.

1 22. The method according to claim 14, wherein the television program is
2 compressed and wherein the encrypted packets comprise packets critical to
3 decompression of the television program.

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5 23. The method according to claim 14, wherein the encrypted packets comprise
6 N packets out of every M packets where N is less than M.

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8 24. The method according to claim 14, further comprising remapping packets
9 having the secondary packet identifier to have the primary packet identifier.

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13 25. An electronic storage medium storing instructions which, when executed on
14 a programmed processor, carry out the method of decoding a television program
15 according to claim 14.

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19 26. An electronic transmission medium carrying a sequence of instructions for
15 carrying out a method of decoding a television program by the method according
16 to claim 14.

1 27. A television device, comprising:
2 means for receiving a partially encrypted television program, the television
3 program being identified by packets associated with either a primary packet
4 identifier or a secondary packet identifier;
5 a decrypter that decrypts packets having the secondary packet identifier; and
6 a decoder that decodes the decrypted packets having the secondary packet
7 identifier along with packets having the primary packet identifier to decode the
8 partially encrypted television program.
9

10 28. The apparatus according to claim 27, further comprising means for
11 discarding encrypted packets having the primary packet identifier.
12

13 29. The apparatus according to claim 27, wherein certain of the packets
14 associated with the primary packet identifier are encrypted according to a first
15 encryption method, and wherein the packets having a secondary packet identifier
16 are encrypted according to a second encryption method.
17

18 30. The apparatus according to claim 27, wherein the encrypted packets
19 comprise transport stream packets carrying an MPEG packetized elementary
20 stream (PES) header as a portion of a payload thereof.
21

22 31. The apparatus according to claim 27, wherein the encrypted packets
23 comprise audio packets.
24

25 32. The apparatus according to claim 27, wherein the encrypted packets
26 comprise video packets.
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28 33. The apparatus according to claim 27, wherein the encrypted packets
29 comprise time sliced samples of the television program.
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1 34. The apparatus according to claim 27, wherein the television device
2 comprises a television set-top box.
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1 35. A content player, comprising:

2 means for receiving partially encrypted audio visual content, the content
3 being identified by packets associated with either a primary packet identifier or a
4 secondary packet identifier;

5 a decrypter that decrypts packets having the secondary packet identifier; and

6 a decoder that decodes the decrypted packets having the secondary packet
7 identifier along with packets having the primary packet identifier to decode the
8 partially encrypted audio visual content.

9
10 36. The apparatus according to claim 35, further comprising means for
11 discarding encrypted packets having the primary packet identifier.

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13 37. The apparatus according to claim 35, wherein certain of the packets
14 associated with the primary packet identifier are encrypted according to a first
15 encryption method, and wherein the packets having a secondary packet identifier
16 are encrypted according to a second encryption method.

17
18 38. The apparatus according to claim 35, wherein the encrypted packets
19 comprise transport stream packets carrying an MPEG packetized elementary
20 stream (PES) header as a portion of a payload thereof.

21
22 39. The apparatus according to claim 35, wherein the encrypted packets
23 comprise audio packets.

24
25 40. The apparatus according to claim 35, wherein the encrypted packets
26 comprise video packets.

27
28 41. The apparatus according to claim 35, wherein the encrypted packets
29 comprise time sliced samples of the television program.

1 42. The apparatus according to claim 35, wherein content player comprises one
2 of a television device, a PDA, a music player and a personal computer.

1 43. A television set-top box, comprising:
2 a receiver that receives:
3 a plurality of unencrypted elementary stream packets; and
4 a plurality of encrypted packets, wherein both the unencrypted are
5 required to decode a television program;
6 a decrypter that decrypts the encrypted packets; and
7 a decoder that decodes the packets to produce a television signal.
8
9 44. The apparatus according to claim 43, wherein the encrypted packets
10 comprise encrypted elementary stream packets.
11
12 45. The apparatus according to claim 43, wherein the unencrypted packets and
13 encrypted packets comprise transport stream packets.
14
15 46. The apparatus according to claim 43, wherein the encrypted packets
16 comprise system information packets.
17
18 47. The apparatus according to claim 43, wherein the encrypted and
19 unencrypted packets are identified by a packet identifier.
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21 48. The apparatus according to claim 47, wherein the unencrypted packets are
22 identified by a primary packet identifier, and wherein the encrypted packets are
23 identified by a secondary packet identifier.

1 49. A circuit, comprising:
2 an input that receives an input stream of packets, the input stream of
3 packets comprising:
4 unencrypted packets having a first packet identifier,
5 encrypted packets having the first packet identifier,
6 encrypted packets having a second packet identifier,
7 a packet identifier reader that reads the packet identifiers of the packets in
8 the input stream of packets, and that discards the encrypted packets having the
9 first packet identifier;
10 a packet identifier re-mapping circuit that re-maps the second packet
11 identifier to the first packet identifier to produce re-mapped packets; and
12 a multiplexer that multiplexes the re-mapped packets with the unencrypted
13 packets having the first packet identifier to produce an output stream of packets.

14
15 50. The apparatus according to claim 49, wherein the encrypted packets having
16 the first packet identifier are encrypted according to a first encryption technique;
17 and wherein the encrypted packets having the second packet identifier are
18 encrypted according to a second encryption technique.

19
20 51. The apparatus according to claim 49, further comprising an MPEG decoder
21 receiving the output stream of packets.

22
23 52. The apparatus according to claim 49, wherein the circuit is embodied in an
24 integrated circuit.

25
26 53. The apparatus according to claim 49, wherein the circuit is embodied in one
27 of a field programmable gate array, a programmable logic device and an
28 application specific integrated circuit.

54. The apparatus according to claim 49, further comprising a demultiplexer that demultiplexes the output stream of packets based upon the packet identifiers.

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1 55. A circuit, comprising:
2 input means for receiving an input stream of packets, the input stream of
3 packets comprising:
4 unencrypted packets having a first packet identifier,
5 encrypted packets having the first packet identifier,
6 encrypted packets having a second packet identifier,
7 packet identifier reading means for reading the packet identifiers of the
8 packets in the input stream of packets, and for discarding the encrypted packets
9 having the first packet identifier;
10 packet identifier re-mapping means for re-mapping the second packet
11 identifier to the first packet identifier to produce re-mapped packets; and
12 multiplexer means for multiplexing the re-mapped packets with the
13 unencrypted packets having the first packet identifier to produce an output stream
14 of packets.
15

16 56. The apparatus according to claim 55, wherein the encrypted packets having
17 the first packet identifier are encrypted according to a first encryption technique;
18 and wherein the encrypted packets having the second packet identifier are
19 encrypted according to a second encryption technique.
20

21 57. The apparatus according to claim 55, further comprising an MPEG decoder
22 receiving the output stream of packets.
23

24 58. The apparatus according to claim 55, wherein the circuit is embodied in an
25 integrated circuit.
26

27 59. The apparatus according to claim 55, wherein the circuit is embodied in one
28 of a field programmable gate array, an application specific integrated circuit and an
29 application specific integrated circuit.
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1 60. The apparatus according to claim 55, further comprising a demultiplexer that
2 demultiplexes the output stream of packets based upon the packet identifiers.
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1 61. A method of processing packets, comprising:
2 receiving an input stream of packets, the input stream of packets
3 comprising:
4 unencrypted packets having a first packet identifier,
5 encrypted packets having the first packet identifier,
6 encrypted packets having a second packet identifier,
7 reading the packet identifiers of the packets in the input stream of packets;
8 discarding the encrypted packets having the first packet identifier;
9 re-mapping the second packet identifier to the first packet identifier to
10 produce re-mapped packets; and
11 multiplexing the re-mapped packets with the unencrypted packets having the
12 first packet identifier to produce an output stream of packets.
13

14 62. The method according to claim 61, wherein the encrypted packets having
15 the first packet identifier are encrypted according to a first encryption technique;
16 and wherein the encrypted packets having the second packet identifier are
17 encrypted according to a second encryption technique.
18

19 63. The method according to claim 61, carried out in an integrated circuit.
20

21 64. The method according to claim 61, carried out in one of a field
22 programmable gate array, a programmable logic device and an application specific
23 integrated circuit.
24

25 65. The method according to claim 61, carried out in a main central processor
26 of a television set-top box.
27

28 66. The method according to claim 61, carried out in a decoder circuit of a
29 television set-top box.
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1 67. The method according to claim 61, further comprising demultiplexing the
2 output stream of packets based upon the packet identifiers.

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1 68. A method of processing packets, comprising:
2 receiving an input stream of packets, the input stream of packets
3 comprising:
4 unencrypted packets having a first packet identifier,
5 encrypted packets having the first packet identifier,
6 encrypted packets having a second packet identifier,
7 reading the packet identifiers of the packets in the input stream of packets;
8 discarding the encrypted packets having the first packet identifier; and
9 re-mapping packets that have not been discarded so that they have the
10 same packet identifier.

11
12 69. The method according to claim 68, further comprising multiplexing the
13 packets that have not been discarded with each other to produce an output stream
14 of packets.

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16 70. The method according to claim 68, wherein the encrypted packets having
17 the first packet identifier are encrypted according to a first encryption technique;
18 and wherein the encrypted packets having the second packet identifier are
19 encrypted according to a second encryption technique.

20
21 71. The method according to claim 68, carried out in an integrated circuit.

22
23 72. The method according to claim 68, carried out in one of a field
24 programmable gate array, a programmable logic device and an application specific
25 integrated circuit.

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27 73. The method according to claim 68, carried out in a main central processor
28 of a television set-top box.

1 74. The method according to claim 68, carried out in a decoder circuit of a
2 television set-top box.

3
4 75. The method according to claim 68, further comprising demultiplexing the
5 output stream of packets based upon the packet identifiers.

1 76. A circuit, comprising:
2 an input that receives an input stream of packets, the input stream of
3 packets comprising:
4 unencrypted packets having a first packet identifier,
5 encrypted packets having the first packet identifier,
6 encrypted packets having a second packet identifier,
7 a packet identifier reader that reads the packet identifiers of the packets in
8 the input stream of packets, and that discards the encrypted packets having the
9 first packet identifier; and
10 a packet identifier re-mapping circuit that re-maps at least one of the second
11 packet identifier and the first packet identifier so that the packets that have not
12 been discarded have the same packet identifier.

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77. The apparatus according to claim 76, further comprising a multiplexer that
multiplexes the re-mapped packets with the unencrypted packets having the first
packet identifier to produce an output stream of packets.

78. The apparatus according to claim 76, wherein the encrypted packets having
the first packet identifier are encrypted according to a first encryption technique;
and wherein the encrypted packets having the second packet identifier are
encrypted according to a second encryption technique.

79. The apparatus according to claim 76, further comprising an MPEG decoder
receiving the output stream of packets.

80. The apparatus according to claim 76, wherein the circuit is embodied in an
integrated circuit.

1 81. The apparatus according to claim 76, wherein the circuit is embodied in one
2 of a field programmable gate array, a programmable logic device and an
3 application specific integrated circuit.